Application No.: 09/530,907

Office Action Dated: March 24, 2004

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A method for the rapid screening of analytes, comprising the

steps of:

a) simultaneously applying a plurality of analytes to be screened onto at least one

solid support such that the analytes remain isolated from one another;

b) contacting said at least one analyte-carrying solid support with targets provided in

a semi-solid or liquid medium, whereby said analytes are released from the at least one solid

support to the targets; and

c) measuring analyte-target interactions.

2. (Original) A method according to Claim 1, wherein step (a) comprises (i)

disposing the analytes within individually identifiable containers, and (ii) transferring the

analytes from the containers to the at least one solid support in such a manner as to maintain

the transferred contents of each container separate from those of each other container.

3. (Original) A method according to claim 2, wherein the individually identifiable

containers are an array of capillary tubes, including capillary tubes, pens, including plotter

pens, and print heads.

4. (Original) A method according to Claim 3, wherein the individually identifiable

containers are an array of capillary tubes each of which is identifiable according to its

position within the array, and wherein transfer of the analytes to the at least one solid support

occurs by dispensing thereof through the open ends of the capillary tubes.

5. (Original) A method according to Claim 1, wherein the solid support is of a

substantially flat, disc-, rectangular- or square-shape.

6. (Currently Amended) A method according to Claim 5, wherein the solid support

comprises a material which allows for spontaneous release of the analytes when applied

therete analytes when applied to the solid support are spontaneously released.

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7. (Currently Amended) A method according to Claim 5, wherein the solid support comprises a material which allows for controlled release of the analytes when applied thereto analytes when applied to the solid support are controlled released.

- 8. (Original) A method according to Claim 6, wherein said material is said semi-solid medium.
- 9. (Original) A method according to Claim 1, wherein when each analyte is applied to the solid support it diffuses thereon so as to produce a concentration gradient.
- 10. (Original) A method according to Claim 1, wherein the surface of the solid support onto which the analytes are applied is selected from polymers, ceramics, metals, cellulose and glass.
- 11. (Original) A method according to Claim 8, wherein said semi-solid medium is disposed on a carrier.
- 12. (Original) A method according to Claim 11, wherein the solid support is a flexible film or tape onto which the target-containing semi-solid medium is applied, whereby the method may be automated using a system of rollers to progress the flexible film or tape through the various steps of the method.
- 13. (Original) A method according to Claim 12, wherein the carrier is covered by a further layer of film or tape and is thereby sandwiched between the solid support and the covering layer.
- 14. (Original) A method according to Claim 12 wherein the solid support or covering layer is provided with a track for the recordal of information regarding the applied analytes, whereby the information can be read and processed simultaneously with the measurement of analyte-target interactions in an automated process.
- 15. (Original) A method according to Claim 1, wherein the solid support is a detector or forms part of a detector.
- 16. (Original) A method according to Claim 15, therein the solid support is selected from a SiO₂ wafer, a charge-coupled device, and a photographic film.
- 17. (Currently Amended) A method according to Claim 1, wherein the surface of the Page 3 of 11

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solid support is coated with a membrane, a molecular monolayer, a cellular monolayer a layer with molecules, a layer with cells or a Langmuir-Blodgett film.

- 18. (Original) A method according to Claim 1, wherein the solid support is [itself] an information carrier which carries information in electronic, magnetic or digitised form.
- 19. (Currently Amended) A method according to Claim 17, wherein said surface of the solid support is reflective a compact disc.
- 20. (Original) A method according to Claim 19, wherein said surface is the reflective surface of a compact disc.
- 21. (Original) A method according to Claim 20, further comprising the step of copying said compact disc to a writable compact disc.
- 22. (Original) A method according to Claim 8 wherein the semi-solid medium comprises a substance which provides a semi-solid or viscous liquid environment allowing controlled release of said analytes to said target.
- 23. (Original) A method according to Claim 22, wherein said substance is selected from gelatin, polysaccharides such as agar and agarose, and polymers such as methylcellulose and polyacrylamide or a so-called intelligent material.
- 24. (Original) A method according to Claim 1 wherein steps a) and b) are carried out simultaneously.
- 25. (Canceled)
- 26. (Currently Amended) A method according to Claim 251, wherein each analyte is applied to a the solid support is of a rod shape or a spherically shaped solid support.
- 27. (Currently Amended) A method according to Claim 25 wherein each analyte-bearing solid support is contacted in step b) with a target <u>provided from in</u> a separate compartment of a multi-compartmented apparatus.
- 28. (Original) A method according to Claim 27, wherein said compartments are an arrangement of mini-wells in said apparatus.

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29. (Original) A method according to Claim 1 wherein the analytes are selected from chemical compounds, antigens, antibodies, DNA-probes, cells and beads and liposomes carrying an analyte of interest.

- 30. (Original) A method according to Claim 29, wherein the analytes, when applied to the solid support, are dissolved in an organic or inorganic solvent.
- 31. (Currently Amended) A method according to Claim 30, wherein the solvent includes a so-called intelligent material responsive to a chemical or physical parameter gelatin, polysaccharides such as agar and agarose, natural and synthetic polymers such as methylcellulose, polyacrylamide, hydrogels, gels containing N-isopropylacrylamide, and thermo-sensitive polymers, such that each analyte following application to the solid support and drying liquefies in response to said chemical or physical parameter.
- 32. (Original) A method according to Claim 1 wherein the analyte is a chemical compound.
- 33. (Original) A method according to Claim 1 wherein said targets are selected from prokaryotic cells, eukaryotic cells, viruses, molecules, receptors, beads, and combinations thereof.
- 34. (Original) A method according to Claim 33, wherein the targets are cells equipped with reporter functions.
- 35. (Original) A method according to Claim 34, wherein said analyte target interactions are measurable by the effects of the analytes on the reporter functions of the cells.
- 36. (Original) A method according to Claim 1 wherein said analyte-target interactions are measured using one or more of the following methods: microscopic, colorimetric, fluorometric, luminometric, densitometric, isotopic, and physical measurements.
- 37. Cancelled
- 38. (Original) A method for the rapid screening of analytes, comprising:
 - a) bringing a first information carrier, in the form of a film or tape, having

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analytes to be screened applied to a surface thereof as discrete spots or lines, into contact with a second information carrier also in the form of a film or tape, having targets of interest embedded in a semi-solid matrix on a surface thereof;

b) winding the respective carriers with their respective analyte- and targetbearing surfaces in contact;

- c) incubating the wound carriers under conditions at which the analytes are released from the first carrier to the target-bearing surface;
 - d) unwinding the first and second carriers; and
- e) passing the second information carrier to an analysis and information reading unit.
- 39. (Original) An apparatus according to Claim 38, wherein said analytes are in liquid form.
- 40. (Original) A method according to Claim 1, substantially as hereinbefore described with references to and as illustrated in the accompanying drawings.
- 41-68. Cancelled